UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,042	10/29/2003	Maya Benson	CE00532UM	6040

20280 7590 02/22/2006

MOTOROLA INC
600 NORTH US HIGHWAY 45
ROOM AS437
LIBERTYVILLE, IL 60048-5343

EXAMINER	
RAMPURIA, SHARAD K	

ART UNIT	PAPER NUMBER
2688	

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/696,042	BENSON ET AL.	
	Examiner	Art Unit	
	Sharad Rampuria	2688	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

I. The current office-action is in response to the application filed on 10/29/03.

Accordingly, Claims 1-19 are pending for further examination as follows:

Priority

II. Receipt is acknowledged of papers submitted under 35 U.S.C. 1 19(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

III. The office acknowledges receipt of a properly signed oath/declaration filed on 10/29/03.

Information Disclosure Statement

IV. The Information Disclosure statement (IDS) submitted is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statements.

Drawings

V. The receipt of drawings filed on 10/29/03 is accepted by examiner.

Claim Rejections - 35 USC § 102

VI. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

VII. Claims 1-11 & 17 is rejected under 35 U.S.C. 102 (b) as being anticipated by Grube et al. [US 5666661].

As per claim 1, Grube teaches:

A method for operating a radiotelephone system (Abstract), the method comprising:

At a first mobile station, requesting communication with a second mobile station; (i.e. Within the communication system 100, any of the communication units (102, 103) may initiate a communication by transmitting a message (119) and an identification code (120). This message (119) may indicate a particular communication request, such as a group call, or private call, where the identification code may indicate an individual unit's code or a group code; Col.2; 44-50 and Claim 1; lines 20-27) and

At a base station serving the first mobile station, if radio propagation conditions between the first mobile station and the second mobile station are sufficiently good, instructing the first mobile station and the second mobile station to establish direct communication. (i.e. Knowing the initiating and target communication units, the communication resource controller (101) can then determine the geographic locations of each of the communication units. With this information, the resource controller can then determine the geographic separation of the units. If the geographic separation is greater than a predetermined distance, the communication resource controller (101) allocates a system communication resource (106-112) to the units. If the geographic separation is less than the predetermined distance, the communication resource controller (101) transmits, on the control channel, a direct mode message to the units, wherein the direct mode message instructs the units to use the direct mode communication resource (122); Col.2; 53-67 and Claim 1; lines 28-41).

As per claim 2, Grube teaches:

The method of claim 1 wherein requesting communication comprises: communication information about the radio propagations conditions between the first mobile station and the second mobile station to the base station. (Col.3; 2-28)

As per claim 3, Grube teaches:

The method of claim 1 wherein instructing the first mobile station and the second mobile station to establish direct communication comprises: establishing independent radio links with the first mobile station and the second mobile station; transmitting a direct communication instruction to the first mobile station and the second mobile station; and terminating the independent radio links. (Col.3; 29-52)

As per claim 4, Grube teaches:

The method of claim 1 further comprising: at the first mobile station, determining the radio propagation conditions between the first mobile station and the second mobile station; communicating information about the radio propagation conditions to the base station; and updating the information about the radio propagation conditions. (Col.3; 29-52)

As per claim 5, Grube teaches:

A method for operating a radiotelephone system, (Abstract), the method comprising:

At one or more mobile stations of the radiotelephone system, detecting other mobile stations to which radio propagation conditions are sufficiently good; (Col.3; 54-Col.4; 2)

At the one or more mobile stations, communicating information about the detected mobile stations to a base station of the radiotelephone system; (Col.3; 54-Col.4; 2)

At a first mobile station, requesting communication with a second mobile station; (i.e. Within the communication system 100, any of the communication units (102, 103) may initiate a communication by transmitting a message (119) and an identification code (120). This message (119) may indicate a particular communication request, such as a group call, or private call, where the identification code may indicate an individual unit's code or a group code; Col.2; 44-50 and Claim 1; lines 20-27) and

At a base station serving the first mobile station, if radio propagation conditions between the first mobile station and the second mobile station are sufficiently good, instructing the first mobile station and the second mobile station to establish direct communication. (i.e. Knowing the initiating and target communication units, the communication resource controller (101) can then determine the geographic locations of each of the communication units. With this information, the resource controller can then determine the geographic separation of the units. If the geographic separation is greater than a predetermined distance, the communication resource controller (101) allocates a system communication resource (106-112) to the units. If the geographic separation is less than the predetermined distance, the communication resource controller (101) transmits, on the control channel, a direct mode message to the units, wherein the direct mode message instructs the units to use the direct mode communication resource (122); Col.2; 53-67 and Claim 1; lines 28-41).

As per claim 6, Grube teaches:

The method of claim 5 further comprising: at the base station, receiving the communication request from the first mobile station; and from the information about the detected mobiles from the first mobile station and the second mobile station, determining if the first mobile station and the second mobile station may initiate direct communication. (Col.3; 54-Col.4; 2)

As per claim 7, Grube teaches:

The method of claim 4 further comprising: determining if each of the first mobile station and the second mobile station is a detected mobile of the other mobile station. (Col.3; 54-Col.4; 2)

As per claim 8, Grube teaches:

The method of claim 6 further comprising: at the base station, determining a location of the first mobile station; determining a location of the second mobile station; and determining information about relative proximity of the first mobile station and the second mobile station based on the location of the first mobile station and the location of the second mobile station. (Col.3; 54-Col.4; 2)

As per claim 9, Grube teaches:

The method of claim 5 wherein instructing the first mobile station and the second mobile station to establish direct communication comprises: initiating a first communication link between the base station and the first mobile station; communicating a direct communication instruction to the first mobile station; initiating a second communication link between the base station and the second mobile station; communicating a direct communication instruction to the second mobile station; terminating the first communication link and the second communication link. (Col.3; 54-Col.4; 9)

As per claim 10, Grube teaches:

The method of claim 5 wherein detecting other mobile stations comprises: detecting respective uplink transmissions from respective mobile stations to base stations of the radiotelephone system. (Col.2; 53-67 and Claim 1; lines 28-41).

As per claim 11, Grube teaches:

The method of claim 10 further comprising: determining a received signal strength for a detected uplink transmission from a detected mobile station; if the received signal strength exceeds a threshold, identifying the detected mobile station as a possible relay candidate. (Col.3; 54-Col.4; 9)

As per claim 17, Grube teaches:

A radiotelephone (Abstract), comprising:

A radio communication circuit configured for two-way radio communication with remote radio devices; (i.e. Within the communication system 100, any of the communication units (102, 103) may initiate a communication by transmitting a message (119) and an identification code (120). This message (119) may indicate a particular communication request, such as a group call, or private call, where the identification code may indicate an individual unit's code or a group code; Col.2; 44-50 and Claim 1; lines 20-27) and

A controller configured to control the radio communication circuit to establish a radio link to a remote base station to convey a request for communication with another radiotelephone and to receive over the radio link a direct communication instruction, and further configured to control the radio communication circuit to interrupt the radio link and establish a relay radio link with the other radiotelephone in response to the direct communication instruction. (i.e. Knowing the initiating and target communication units, the communication resource controller (101) can then determine the geographic locations of each of the communication units. With this information, the resource controller can then determine the geographic separation of the units. If the geographic separation is greater than a predetermined distance, the communication resource controller (101) allocates a system communication resource (106-112) to the units. If the geographic separation is less than the predetermined distance, the communication resource controller (101) transmits, on the control channel, a direct mode message to the units, wherein the direct mode message instructs the units to use the direct mode communication resource (122); Col.2; 53-67 and Claim 1; lines 28-41).

Claim Rejections - 35 USC § 103

VIII. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

IX. Claims 12, 14-16 & 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grube in view of Mauney et al. [US 6865372].

As per claim 12, Grube teaches all the particulars of the claim except at the first mobile station, in response to the instruction establish direct communication, entering a packet-based connectionless communication mode with the second mobile station. However, Mauney teaches in an analogous art, that the method of claim 5 further comprising: at the first mobile station, in response to the instruction establish direct communication, entering a packet-based connectionless communication mode with the second mobile station. (Col.67; 31-42 and Claim 1) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Grube including at the first mobile station, in response to the instruction establish direct communication, entering a packet-based connectionless communication mode with the second mobile station in order to provide a wireless handsets with enhanced functionality, including the ability to operate within a wireless network and in a direct handset-to-handset communication mode.

As per claim 14, Grube teaches:

A method for operating a base station in a radiotelephone system, the method comprising:

Receiving a request from a first mobile station to initiate a call with a second mobile station in the radiotelephone system; (i.e. Within the communication system 100, any of the communication units (102, 103) may initiate a communication by transmitting a message (119) and an identification code (120). This message (119) may indicate a particular communication request, such as a group call, or private call, where the identification code may indicate an individual unit's code or a group code; Col.2; 44-50 and Claim 1; lines 20-27)

Grube fails to teaches based at least in part on a relay candidate list associated with the first mobile station, determining if the second mobile station is physically close to the first mobile station; and if so, instructing the first mobile station and the second mobile station to enter a relay mode for direct link communication. However, Mauney teaches in an analogous art, that based at least in part on a relay candidate list associated with the first mobile station, determining if the second mobile station is physically close to the first mobile station; and if so, instructing the first mobile station and the second mobile station to enter a relay mode for direct link communication. (Col.31; 66-Col.32; 10, Col.33; 66-Col.34; 21) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Grube including based at least in part on a relay candidate list associated with the first mobile station, determining if the second mobile station is physically close to the first mobile station; and if so, instructing the first mobile station and the second mobile station to enter a relay mode for direct link communication in order to provide a wireless handsets with enhanced functionality, including the ability to operate within a wireless network and in a direct handset-to-handset communication mode.

As per claim 15, Grube teaches:

The method of claim 14 wherein instructing the first mobile station and the second mobile station to enter a relay mode comprises: communicating information about the relay mode a over a first link with the first mobile station; communicating information about the relay mode a over a second link with the second mobile station; and terminating both the first link and the second link. (Col.3; 29-52)

As per claim 16, Grube teaches all the particulars of the claim except receiving from respective mobile stations of the radiotelephone system information about relay candidates of the respective mobile stations; storing the information in respective relay candidate lists; and receiving updates from the respective mobile stations for updating the respective relay candidate lists. However, Mauney teaches in an analogous art, that the method of claim 14 further comprising: receiving from respective mobile stations of the radiotelephone system information about relay candidates of the respective mobile stations; storing the information in respective relay candidate lists; and receiving updates from the respective mobile stations for updating the respective relay candidate lists. (Col.31; 66-Col.32; 10, Col.33; 66-Col.34; 21)

As per claim 18, Grube teaches all the particulars of the claim except a memory configured to store a relay candidate list, the controller being further configured to control the radio communication circuit to establish a radio link to the remote base station to convey the relay candidate list to the remote base station. However, Mauney teaches in an analogous art, that the radiotelephone of claim 17 further comprising: a memory configured to store a relay candidate list, the controller being further configured to control the radio communication circuit to establish a radio link to the remote base station to convey the relay candidate list to the remote base station. (Col.31; 66-Col.32; 10, Col.33; 66-Col.34; 21)

As per claim 19, Grube teaches all the particulars of the claim except the controller is further configured to control the radio communication circuit to detect radio transmissions from other radiotelephones and, in response to the detected uplink transmissions, to populate the relay candidate list. However, Mauney teaches in an analogous art, that the radiotelephone of claim 18 wherein the controller is further configured to control the radio communication circuit to detect radio transmissions from other radiotelephones and, in response to the detected uplink transmissions, to populate the relay candidate list. (Col.31; 66-Col.32; 10, Col.33; 66-Col.34; 21)

X. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grube in view of 3G TR 25.924 V1.0.0 (1999-12) Technical Report, "3rd Generaticn Partnership Project; Technical Specification Group Radio Access Network; Opportunity Driven Multiple Access (3G TR 25.924 version1.0.0) hereinafter Technical report.

As per claim 13, Grube teaches all the particulars of the claim except the packet-based connectionless communication mode comprises entering an Opportunity Driven Multiple Access relay mode. However, Technical report teaches in an analogous art, that the method of claim 12 wherein packet-based connectionless communication mode comprises entering an Opportunity Driven Multiple Access relay mode. (Pg.5; 1: Scope and 4: Opportunity Driven Multiple Access) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Grube including packet-based connectionless communication mode comprises entering an Opportunity Driven Multiple Access relay mode in order to provide a technique of communication based on Opportunity Driven Multiple Access system.

Conclusion

XI. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or *EBC@uspto.gov*.

Sharad Rampuria
Examiner
Art Unit 2688

George Eng.

GEORGE ENG
SUPERVISORY PATENT EXAMINER